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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,647	10/13/2000	Walter Hans Meissner	2925-0438P	7894

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EXAMINER	
EDELMAN, BRADLEY E	

ART UNIT	PAPER NUMBER
2153	9

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/689,647	MEISSNER ET AL.	
	Examiner	Art Unit	
	Bradley Edelman	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to applicant's amendment and request for reconsideration filed on December 15, 2003. Claims 1-15 are presented for further examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In considering claim 2, the phrase "the first layers" on lines 4-5 of the claim lack sufficient antecedent basis. Only one first layer is referred to previously in the claim.

In considering claim 3, the phrase "the plurality of layer contests" on lines 7-8 of the claim lack sufficient antecedent basis. It appears that the word "contests" should read "contexts."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Moberg et al. (U.S. Patent No. 6,578,084, hereinafter "Moberg").

In considering claim 1, Moberg discloses a method of processing a message comprised of a plurality of layers (Fig. 2: The message layers used on the LAN, item 12A are Ethernet, IP, TCP, and HTTP. The Wide Area Network link, item 16 uses layers HDLC, IP, TCP, and HTTP), the method comprising the steps of:

Linking (dynamically chains or links the elements together) a plurality of layer contexts based on addresses (col. 5, lines 34-41; elements, correspond to protocol layers such as IP and TCP and other processes/layers such as encryption and compression, wherein the contexts of the layers are linked based on addresses); and

Encoding each layer of the plurality of layer contexts after the step of linking is complete (col. 5, lines 42-48, wherein the chain walker is used to process/encode the packet or message through each of the layers in the chain; col. 9, lines 27-31, since the first layer context has a next field with the address of the second layer context and the second layer context has a previous field with the address of the first layer context then the two contexts are linked).

In considering claim 2, Moberg further discloses the steps of:

Determining an address of a first layer context (Fig. 5 and col. 9, lines 21-26, wherein the content of item 104A is the address of the first element or layer context, item 106); and

Passing the address of the first layer context to a second layer, which is adjacent to the first layer (Fig. 5 and col. 9, lines 27-31. Item 107 is the second layer context, and its previous field has an address that points to the first layer content as shown by the arrow); and

Setting a second layer context address equal to the address of the first layer, whereby the contexts of the first and second layers are linked (Fig. 5 and col. 9, lines 27-31. Since the first layer context has a next field with the address of the second layer context and the second layer context has a previous field with the address of the first layer context then the two contexts are linked).

In considering claim 3, Moberg further discloses the steps of:

Passing the address of the linked contexts of the first and second layers to an adjacent subsequent layer (col. 9, lines 27-31. The previous field in the third layer context will have an address that points to the second layer context which is linked to the first layer context);

Setting a context of the adjacent subsequent layer context equal to the address of the linked context of the first and second layers, whereby the linked context and the context to the adjacent subsequent layer is thereby linked (col. 9, lines 27-31. The next field in the second layer context will have an address that points to the third layer

context and the third layer context, previous field, will have an address that points to the second layer context that is linked to the first layer context. This will link all three layer contexts); and

Repeating the steps of linking layer contexts until each layer context in the plurality of layer contexts is linked (col. 9, lines 36-39. The next and previous fields are used to link the context of each layer for the plurality of layers using the addresses stored in these fields).

In considering claim 4, Moberg further discloses that each layer context comprises variables and methods (Fig. 5, 106C-E, col. 9, lines 31-34).

In considering claim 5, Moberg further discloses variables comprising a least header field values (col. 7, lines 54-59, Time-to-live counter and header checksum are filed values in the IP header), trailer field values (Fig. 3, col. 5, lines 30-33, the HDLC protocol specifications and Ethernet specification require a CRC value that is a trailer value), buffer positions (Fig. 3, and col. 5, lines 26-33, the chain walker stripped the Ethernet header and looked into the IP header then put on an HDLC header therefore the buffer positions are inherently known), and addresses to other contexts (Fig. 6, item 134 and col. 9, lines 63-65, the pointer to the next chain element is the address of the next layer context).

In considering claim 6, Moberg further discloses that the encoding method includes at least methods for encoding (encapsulation) and decoding (decapsulation), one method deciding being a method for furnishing a context (reading the IP header to obtain the destination address is furnishing a context) of a message (col. 5, lines 19-32).

In considering claim 7, Moberg further discloses that the method for encoding comprises a method for computing message body dependent fields to include message length (the IP header has a total length field and a UDP packet has a Datagram length field. Therefore, message length dependent fields will be inherently present in the encoding method) and CRC (Fig. 3, the HDLC packet must have an FCS field, that is a CRC. Therefore the CRC value is inherently present in the message encoding method) fields (Fig. 3 and col. 8, lines 7-14).

In considering claim 8, Moberg further discloses that the step of encoding comprises the steps of:

Incrementing a current buffer position by a header length of a first layer (Fig. 3, the first layer HTTP Header, item 24, is appended directly to the message in the buffer, thereby incrementing the buffer position by the length of the HTTP header) in the linked plurality of layers;

Setting the current buffer position equal to the buffer position obtained by incrementing the current buffer position by the header length of the first layer (Fig. 3, the TCP header, item 26, which is the next layer after the HTTP layer, will occupy the

address space in the buffer, obtained by incrementing the start of message address by the HTTP header length); and

Repeating the incrementing and setting steps for each of the remaining linked layers (the TCP header is added to the buffer then the IP header will be added by incrementing the buffer position by the size of the TCP header – Fig. 3, col. 5, lines 19-25).

In considering claim 9, Moberg further discloses calculating an aggregate value for layer contexts having variable length headers (TCP implementation requires the support of variable length headers as per RFC 793, therefore the TCP header inherently calculates the aggregate value of a variable length header); and setting the aggregate value equal to the header length in said incrementing step (Fig. 3).

In considering claim 10, Moberg further discloses the step of terminating buffer incrementing upon detection of an end-of-layer context indicator (the chain walker executes each chain element, which is a layer context, in the chain until there are no more layers or end-of-layers, Fig. 6, col. 10, lines 12-21).

In considering claims 11 and 12, Moberg further discloses:

Moving header field data of each layer context into a message stream (Fig. 3, item 20C);

The movement of header field data results in a formatted message stream having therein encoded data obtained from the linked plurality of layer contexts (Fig. 3, col. 5, lines 19-32 discloses a message ready for transmission which would be fully encoded).

Although Moberg does not explicitly discuss moving trailer data of each layer context into the message, or that the trailer field data associated with each layer comprise CRC/FCS data, note that the that the HDLC protocol specifications and Ethernet specification require a trailer value, which is a CRC value, to be included in all messages. Thus, because Moberg discloses the use of Ethernet and HDLC, Moberg inherently discloses moving the trailer data of each layer context into the message and discloses using CRC/FCS data.

In considering claim 13, Moberg further discloses that the step of linking entails linking layer contexts comprising unformatted layer values (IP-rewrite element decrements the time-to-live count and recalculates the IP header checksum value. Each layer will modify the message until the final layer when the message will be fully processed and thus totally formatted – col. 6, lines 30-40).

In considering claim 14, Moberg further discloses that the encoding step encodes each layer context of the linked plurality o flayer contexts into a single buffer (Fig. 3 item 20C, the reformatted message is a single buffer that includes the application message and the headers for each layer; col. 5, lines 19-32).

In considering claim 15, Moberg discloses a method for processing a formatted layered message (Fig. 2 item 18A shows the HTTP, TCP, IP and Ethernet layers required for the transmission of a message) for transmission over a communication network (Fig. 2, item 12A is a LAN), the formatted layered message having encoded data (Fig. 3, item 20A shows the formatted Ethernet message that is transmitted on the LAN, with the headers of the respective layers – Figs. 2, col. 5, lines 19-32), the processing of the formatted layered message comprising the steps of:

Combining unformatted elements to link a plurality of layer contexts based on addresses (Fig. 5; col. 9, lines 21-39, wherein item 106 represents one layer context and shows the unformatted information in the layer. Item 107, which is the next layer, has a previous field with the address of item 106 thereby linking the layer contexts); and

Using a method (the chain walker is used to process/encode the packet or message through each of the layers in the chain) on the unformatted elements to form the formatted layered message (col. 5, lines 41-47).

Response to Arguments

Applicant's request for reconsideration filed on December 15, 2003 makes the following factual arguments:

a. Moberg fails to disclose linking a plurality of layer contexts based on addresses and encoding each layer context of the plurality of layer contexts based after the step of linking is complete, as recited in claim 1.

b. Moberg fails to disclose combining unformatted elements to link a plurality of layer contexts based on addresses and using a method based on the combining step on the unformatted elements to form a formatted layered message, as recited in claim 15.

Examiner respectfully disagrees with both of these arguments, for the reasons described in the claim rejections above. Note that the terms "linking," "layer contexts," "addresses," and "encoding," are broad terms that can be interpreted broadly. Examiner has interpreted them in the manner described in the claim rejections above, and thus the claims remain rejected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all correspondences: (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

BE
February 20, 2004

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100